

## WEST Search History

DATE: Thursday, May 12, 2005

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		<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L8	17 and 12	28
<input type="checkbox"/>	L7	16 and 12	28
<input type="checkbox"/>	L6	(pei or polyethyleneimine\$1).ab.	3050
<input type="checkbox"/>	L5	13 and 14	28
<input type="checkbox"/>	L4	BTCA or (butanetetracarboxylic acid\$1)	1418
<input type="checkbox"/>	L3	11 and 12	760
<input type="checkbox"/>	L2	510/\$.ccls. or 8/\$.ccls.	94785
<input type="checkbox"/>	L1	aminosilicone\$1 or (amino near4 silicone\$1)	6139

END OF SEARCH HISTORY



Application No: GB 0225292.2  
Claims searched: 1-20

Examiner: Peter Davey  
Date of search: 17 March 2003

## Patents Act 1977 : Search Report under Section 17

### Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X	1 and 16 at least	US 5399652 (WACKER-CHEMIE), see eg. claim 11
X	"	US 4701488 (UNION CARBIDE), see eg. claim 1 and col. 12, lines 27-29
X	"	US 4404332 (AMERICAN CYANAMID), see eg. claims 1, 4 and 6 and col. 1, lines 21-22
X	"	WPI Abstract Acc. No. 1997-018027 and JP 8284068 A (KANEBO), see abstract
X	"	WPI Abstract Acc. No. 1993-340262 and JP 5247850 A (NEW JAPAN CHEM. ET AL), see abstract
X	"	WPI Abstract Acc. No. 1990-295743 and JP 2210073 A (NISSHIN), see abstract

### Categories:

X Document indicating lack of novelty or inventive step	A Document indicating technological background and/or state of the art.
Y Document indicating lack of inventive step if combined with one or more other documents of same category.	P Document published on or after the declared priority date but before the filing date of this invention.
& Member of the same patent family	E Patent document published on or after, but with priority date earlier than, the filing date of this application.

### Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKCY:

D1P

Worldwide search of patent documents classified in the following areas of the IPC<sup>7</sup>:

D06M

The following online and other databases have been used in the preparation of this search report:

WPI, EPODOC, JAPIO

0008

0008

none

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PN - JP8284068 A 19961029  
 PD - 1996-10-29  
 PR - JP19950096213 19950328  
 OPD - 1995-03-28  
 TI - SHRINK-PROOFING OF CELLULOSE-BASED FIBER KNIT FABRIC  
 IN - SAITO TOSHIO  
 PA - KANEBO LTD  
 IC - D06M15/564 ; D06M15/39 ; D06M15/643

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TI - Shrink proofing cellulose fibre knitted fabric - involves adding mixt. contg. cation urethane] resin, reactive urethane], non-formalin resin, carboxylic] acid or silicone]  
 PR - JP19950096213 19950328  
 PN - JP8284068 A 19961029 DW199702 D06M15/564 005pp  
 PA - (KANE ) KANEBO LTD  
 IC - D06M15/39 ; D06M15/564 ; D06M15/643  
 AB - J08284068 The method comprises adding a treating liq. (TL) of cation urethane resin (CU), reactive urethane resin (RU), non-formalin resin (GR), polycarboxylic acid (CA) or silicone resin (SR), etc. onto a base knitted fabric of cellulose fibre (BF).  
 - The knitted fabric having a good soft feel, slight amt. of shrinking by washing and no forming formaline is produced without lowering its rupture strength.  
 - (Dwg.0/0)  
 OPD - 1995-03-28  
 AN - 1997-018027 [02]

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PN - JP8284068 A 19961029  
 PD - 1996-10-29  
 AP - JP19950096213 19950328  
 IN - SAITO TOSHIO  
 PA - KANEBO LTD  
 TI - SHRINK-PROOFING OF CELLULOSE-BASED FIBER KNIT FABRIC  
 AB - PURPOSE: To obtain a knit fabric of a non-formalin type having soft feeling and small washing shrinkage by applying a treating solution consisting of a resin composition containing a cationic urethane resin to a cellulose-based fiber knit fabric.

none

none

done

**CONSTITUTION:** This method for shrink-proofing of a cellulose-based fiber knit fabric is to immerse the cellulose-based fiber knit fabric such as a cotton interlock fabric, etc., in a treating solution prepared with a cationic urethane resin and at least one resin selected from a group consisting of a reactive urethane, a non-formalin type glyoxal-based resin expressed by the formula (R is H or an alkyl), a polycarboxylic acid such as 1,2,3,4-butanetetracarboxylic acid, and a silicone resin such as an amino modified-, an epoxy modified-, a fluorine modified-, a carboxy modified- or a carbinol modified silicone resin, wring the immersed knit fabric and heat treat the fabric after drying and obtain the objective knit fabric rich in shrink-resistance.

- D06M15/564 ;D06M15/39 ;D06M15/643

none	none
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PN - JP5247850 A 19930924  
 PD - 1993-09-24  
 PR - JP19920046665 19920304  
 OPD - 1992-03-04  
 IN - MIURA HIROYUKI;MURAI KOICHI;OTANI MOTOHIKO;SAKAI  
 YOSHIAKI;FUJITANI TSURATAKE;TSUJIMOTO YUTAKA  
 PA - NEW JAPAN CHEM CO LTD;SHIKIBO LTD  
 IC - D06M15/643 ; C08B1/00 ; C08J7/00 ; D06M13/192 ; D06M101/06  
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TI - Prepn. of cellulose@ fibre with shrinkproof property - by  
 impregnating with poly:carboxylic acid, silicon cpd. contg. aliphatic  
 hydroxyl(s) and/or amino gp. and heating  
 PR - JP19920046665 19920304  
 PN - JP5247850 A 19930924 DW199343 D06M15/643 005pp  
 PA - (SHIV) NEW JAPAN CHEM CO LTD  
 - (SHIK-N) SHIKISHIMA BOSEKI KK  
 IC - C08B1/00 ; C08J7/00 ; D06M13/192 ; D06M15/643 ; D06M101/06  
 AB - J05247850 Preparation of (C) a cellulose fibre is by impregnating  
 (P) a polycarboxylic acid, (S) a silicon-cpd. contg. at least one  
 aliphatic hydroxyl-gp. and/or amino-gp. into (C') a cellulose fibre,  
 heating it. (C) is pref. cotton, hemp, rayon, is pref. (non)woven or  
 knitted fabric. (P) is pref. of oxalic-, malonic-, succinic-, glutaric-,  
 adipic-acid, etc. (S) is pref. of skeleton of dimethyl-polysiloxane e.g.  
 silicone modified by amino-gp. e.g. "SF8417, or BY16-828" (RTM)  
 available from Tore. Dowcorning.Silicone; silicone modified by  
 polyether(polyoxyethylene and/or polyoxypropylene); silicone  
 modified by alcohol, etc.  
 - Amt. of (P) is pref. 0.5-20 wt. % based on (C') cellulose fibre.  
 Amt. of (S) is pref. 0.1-100 wt. % based on (C') cellulose fibre.  
 Impregnation of (P) and (S) into is carried out in a bath of pH of 1-6  
 at 40-150 deg. for 0.5-300 sec.  
 - USE/ADVANTAGE - Used for clothes, shirts, can be produced.  
 Durable shrink-proofing. (Dwg.0/0)

OPD - 1992-03-04  
 AN - 1993-340262 [43]

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PN - JP5247850 A 19930924  
 PD - 1993-09-24

note	none	none
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- AP - JP19920046665 19920304
- IN - FUJITANI TSURATAKE; others:05
- PA - SHIKISHIMA BOSEKI KK; others:01
- TI - CELLULOSE FIBER IMPARTED WITH SHRINK RESISTANCE AND ITS PRODUCTION
- AB - PURPOSE:To obtain a fiber having durable shrink resistance and free from generation of formalin by immersing a cellulose fiber in a treating liquid containing a specific polycarboxylic acid and a silicon compound and heat- treating the impregnated fiber.
- CONSTITUTION:A textile material composed of cellulose fiber is immersed in a treating emulsion liquid containing a polycarboxylic acid (especially butanetetracarboxylic acid) and a silicon compound having at least one aliphatic hydroxyl group and/or amino group in the molecule (preferably polyether- modified silicone, etc.) and adjusted to pH 2-5. The impregnated textile material is squeezed, dried and heat-treated to obtain the objective cellulose fiber imparted with shrink resistance durable to washing and free from the problems of the deterioration of fiber and the generation of formalin.
- SI - D06M101/06
- I - D06M15/643 ;C08B1/00 ;C08J7/00 ;D06M13/192

none	none	none
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PN - JP2210073 A 19900821  
 PD - 1990-08-21  
 PR - JP19890030633 19890209  
 OPD - 1989-02-09  
 TI - TREATING AGENT FOR FIBER  
 IN - IIDA SHUICHI;SAGA HIROSHI;SUEMOTO KIYOJI;TERASAKI  
 SATORU  
 PA - NISSHIN KAGAKU KOGYO KK  
 IC - C08L51/08 ; D06M15/263 ; D06M15/423 ; D06M15/643  
 CT - JP48082191 A [ ]; JP58126378 A [ ]  
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TI - Treating agent for fibre to give durability for washing - comprises copolymer emulsion contg., organo:siloxane, water soluble amino resin, curing catalyst and crosslinker  
 PR - JP19890030633 19890209;JP19890003063 19890209  
 PN - JP2210073 A 19900821 DW199039 000pp  
 - JP2703603B2 B2 19980126 DW199809 D06M15/643 015pp  
 PA - (NISV) NISSHIN CHEM IND CO LTD  
 C - C08L51/08 C08L61/20  
 IC - C08L51/08 ;C08L61/20 ;D06M15/423 ;D06M15/64 ;D06M15/643  
 AB - J02210073 Treating agent comprises (I) a copolymer-emulsion copolymerised by emulsion-polymerisation of mixed monomers of (A)5-95 pts.wt. of organo-siloxane represented by formula (I). In (I) R1, R2, R3 =separately 1-20C monovalence -hydrocarbon or -halogenated-hydrocarbon; Y=organic-gp. bonding radical-reactive-gp. and SH-gp.; X=H, monovalence-low-alkyl-gp. or R1R2R3R4Si-gp., where R4=same gp. as R1 and Y; n=integer below 10000; n=integer above 1; (B)95-5 pts.wt. of single or mixed monomers of (B1)70-100 wt.% of (meth)acrylic monomers represented by formula CH2=CR5-COOR6 where R5=H or methyl; R6=1-18C alkyl or alkyl substd. with alkoxyl-gp., and (B2)multi-functional monomers: ethylene-unsatd. amide; ethylene-unsatd.-amide substd. with alkylol or alkoxyalkyl; ethylene-unsatd.-monomer bonding oxysilane-, hydroxyl-, carboxyl-, amino-, sulphonic-acid-, phosphoric-acid-, polyalkylene-oxide-, or quaternary ammonium-salt- gp.; complete-ester of polyatomic-alcohol and (meth)acrylic-acid; dialylester of dibasic-acid; allyl(meth)acrylate; or divinylbenzene; and (B3)0-20 wt.% of the other ethylene-unsatd.-monomer than the (B1) and

none

none

none

(B2); where total amt. of the (B1), (B2) and (B3): 100 wt.%; in the presence of a radical-initiator. Other components are (II) a water-soluble amino-resin; and (III) a curing catalyst for the (II); to which (IV) a liq. organo-polysiloxane including at least three hydrogen-atoms bonding with the Si-atom in one molecule of the organo-polysiloxane; (V) a catalyst for cross-linking by the (IV) can be added; glass-transition-pt. of a homo- or co- polymer of the monomers of the (B) in the (I) below 0 deg.C.

- USE/ADVANTAGE - Fabrics can be treated by the agent to give durability for washing, high-softness and impact-resilience, and feeling of thickness; further can be given anti-wrinkle-, anti-crimp-, wash/ware- and permanent/press- property without deteriorating tensile-, sharing-, bending- and abrasion- strength of the fabrics.

- (Dwg.0/0)

OPD - 1989-02-09

AN - 1990-295743 [25]

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PN - JP2210073 A 19900821

PD - 1990-08-21

AP - JP19890030633 19890209

IN - IIDA SHUICHI; others03

PA - NISSHIN KAGAKU KOGYO KK

TI - TREATING AGENT FOR FIBER

AB - PURPOSE: To obtain the subject treating agent, containing a copolymer emulsion consisting of an organopolysiloxane and specific monomer and a water-soluble amino resin, etc., and capable of imparting crease resistance, shrinkproofness and wash and wear(W/W) properties and further soft hand, etc., to natural fiber, etc.

- CONSTITUTION: A treating agent for fiber obtained by blending (A) a copolymer emulsion prepared by carrying out emulsion polymerization of a mixture consisting of (A1) an O/W emulsion of 5-95 pts.wt. organopolysiloxane expressed by formula I ( $R<1>$  to  $R<3>$  are groups selected from 1-20C monofunctional hydrocarbons and monofunctional halogenated hydrocarbons; Y is group in which radically reactive group and SH group are selected from organic groups; X is H, etc.; m is  $\geq 10000$ ; n is  $\geq 1$ ) and (A2) 95-5 pts.wt. (mixed) monomers consisting of (i) 70-100wt.% polyfunctional monomer selected from acrylic and methacrylic monomers expressed by formula II ( $R<5>$  is H, etc.;  $R<6>$  is 1-18C alkyl, etc.), (ii) 0-20wt.% polyfunctional monomer, such as ethylenically unsaturated amide, and (iii) 0-20wt.% ethylenically



none

none

none

unsaturated monomers other than those described above with (B) a water-soluble amino resin and (C) a curing catalyst.

- I - D06M15/643 ;C08L51/08 ;D06M15/263 ;D06M15/423
- C - C08L51/08 C08L61/20